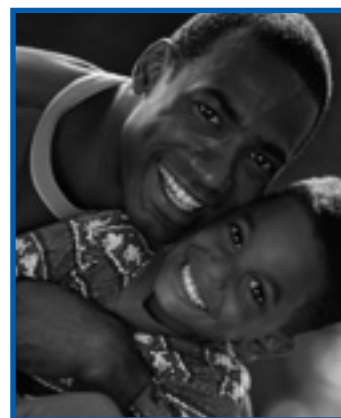


Oral Health

Preventing Cavities, Gum Disease, and Tooth Loss 2005



"No one should suffer from oral diseases or conditions that can be effectively treated or prevented."

*Richard H. Carmona, MD, MPH, FAC
Surgeon General
U.S. Public Health Service*

Oral Health Problems: Painful, Costly, and Preventable

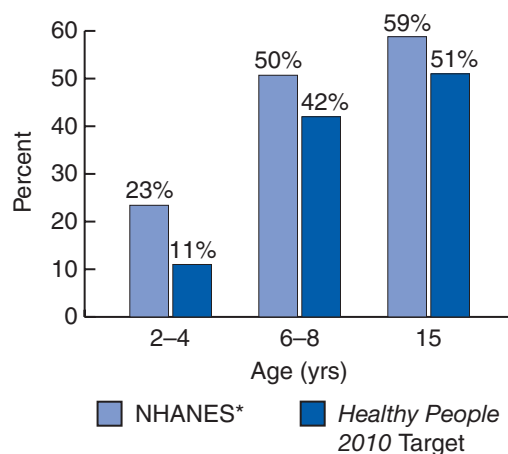
Mouth and throat diseases, which range from cavities to cancer, cause pain and disability for millions of Americans. This fact is disturbing because almost all oral diseases can be prevented.

For children, cavities are a common problem that begins at an early age. Tooth decay affects more than one-fifth of U.S. children aged 2–4, half of those aged 6–8, and nearly 60% of those aged 15. Low-income children are hardest hit: about one-third have untreated decay. Untreated cavities may cause pain, dysfunction, absence from school, underweight, and poor appearance—problems that can greatly reduce a child’s capacity to succeed in life.

Tooth decay is also a problem for U.S. adults, especially for the increasing number of older adults who have retained most of their teeth. Despite this increase in tooth retention, tooth loss remains a problem among older adults. One fourth of adults over age 60 have lost all of their teeth, primarily because of tooth decay, which affects 95% of all adults, and advanced gum disease, which affects about 1 in 4 adults. Tooth loss has more than cosmetic effects—it may contribute to nutrition problems by limiting the types of food that a person can eat.

In addition, oral cancers pose a threat to the health of American adults. Each year, about 28,000 people learn that they have mouth and throat cancers, and nearly 7,200 die of these diseases.

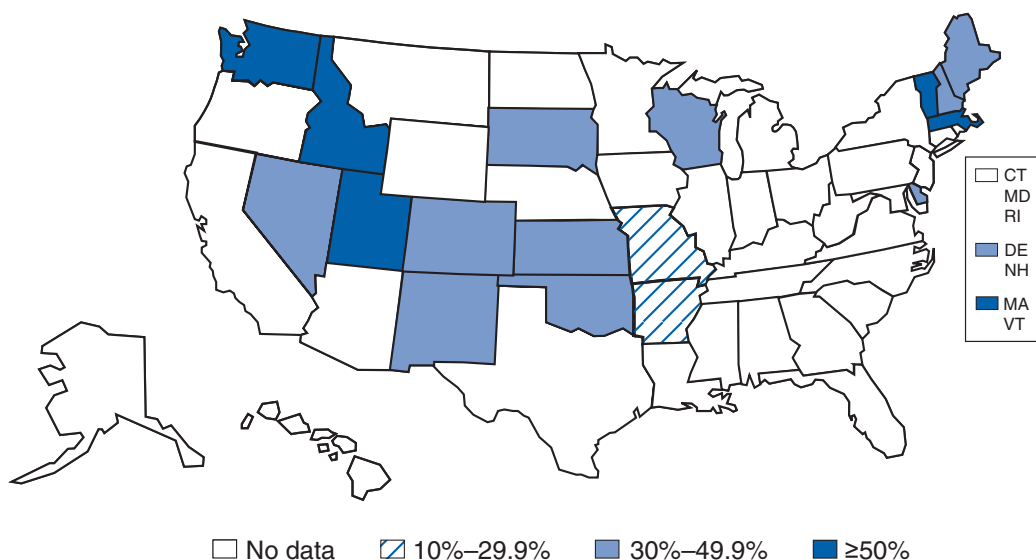
U.S. Children Who Have Had Cavities



Source: National Health and Nutrition Examination Survey, 1999–2000. National Center for Health Statistics, CDC.

In 2004, Americans made about 500 million visits to dentists, and an estimated \$78 billion was spent on dental services. Yet many children and adults still go without measures that have been proven effective in preventing oral diseases and reducing dental care costs. For example, over 100 million Americans still do not have access to water that contains enough fluoride to protect their teeth, even though the per capita cost of water fluoridation over a person’s lifetime is less than the cost of one dental filling.

Percentage of Third-Grade Students with Dental Sealants



Note: *The Healthy People 2010* objective is for 50% of all children aged 8 to have dental sealants.

Source: CDC and the Association of State and Territorial Dental Directors. National Oral Health Surveillance System. Available at <http://www.cdc.gov/nohss>.

CDC's National Leadership to Improve Oral Health

CDC is committed to ensuring that all people achieve their optimal lifespan with the best possible quality of health in every stage of life. With a number of important new health impact goals, CDC is setting the agenda to enable the American people to enjoy a healthy life by delaying death and the onset of illness and disability. In addition, CDC works to eliminate disparities by accelerating improvements for those at the greatest risk of poor health.

CDC is the lead federal agency responsible for promoting oral health through public health interventions. With fiscal year 2005 funding of about \$11 million, CDC

- Helps states strengthen their oral health programs, reach people hardest hit by oral diseases, and expand the use of measures proven effective in preventing oral diseases.
- Promotes oral health in communities, schools, and health care settings nationwide.
- Supports research to strengthen prevention efforts in communities.
- Evaluates the cost-effectiveness of prevention strategies.

Building Capacity in States

CDC provides 12 states and the Republic of Palau with funds, technical assistance, and training to build strong oral health programs. With CDC support, states can better promote oral health, monitor oral health behaviors and problems, and conduct and evaluate prevention programs. Five of the 12 states also receive funds to develop and coordinate community water fluoridation programs or school-based dental sealant programs.

In addition, CDC works with the Association of State and Territorial Dental Directors to guide states on oral health issues, improve state oral health program standards, and help states develop the expertise to assess oral health needs and conduct effective prevention programs.

Encouraging Effective Use of Fluoride

CDC provides national leadership in assessing the appropriate use of various forms of fluoride. CDC also works with state and national partners to improve the quality of water fluoridation and implement water fluoridation in new communities. Over the past 50 years, the damage caused by tooth decay has been drastically reduced, primarily through the use of fluoride. The most cost-effective way to deliver the benefits of fluoride to all residents of a community is through

water fluoridation—that is, adjusting the fluoride in the public water supply to the right level for decay prevention.

A CDC study found that, in communities with more than 20,000 residents, every \$1 invested in community water fluoridation yields \$38 in savings each year from fewer cavities treated. The Task Force on Community Preventive Services, which strongly recommends community water fluoridation, concluded that tooth decay in American children has decreased by 30%–50% because of fluoridation. CDC activities for promoting fluoride include the following:

- Issuing *Recommendations for Using Fluoride to Prevent and Control Dental Caries in the United States* (MMWR 2001;50[RR-14]), available at <http://www.cdc.gov/mmwr>.
- Providing fluoridation training to state drinking water system engineers, dental directors, and other public health staff members.
- Managing a Web-based system that helps states monitor the quality of fluoridated water systems.
- Educating people throughout the country on the appropriate use of fluoride products.

Promoting Use of Dental Sealants

Dental sealants—a plastic coating applied to the chewing surfaces of the back teeth—are a safe, effective way to prevent cavities among schoolchildren. In some cases, sealants can even stop tooth decay that has already started. Sealants significantly reduce a child's risk for having untreated cavities.

Healthy People 2010 calls for half of all U.S. children to have dental sealants by 2010. Currently, fewer than one-third of children aged 6–19 do. In addition, children in some racial and ethnic groups are less likely than others to have sealants. For example, fewer than 1 in 4 African American 8-year-olds have sealants on their teeth.

The Task Force on Community Preventive Services strongly recommends school-based or school-linked sealant programs as an effective way to prevent and control cavities. In addition, CDC researchers evaluated several strategies and found that delivering sealants to all children attending low-income schools was a cost-effective strategy for reducing disparities in sealant use. By offering school-based or school-associated sealant programs, some communities have already reached the *Healthy People 2010* objective for dental sealants.

Helping States Improve Oral Health

Focus on Adult Oral Health

CDC continues to expand activities that support a range of community approaches to promote adult oral health and reduce oral disease. These approaches include monitoring oral health status, expanding partnerships, supporting prevention research, and increasing public and professional awareness of common oral conditions, risk factors, and healthy behaviors.

CDC provides resources to expand partnerships among the aging services network and key stakeholders, such as state dental directors, dental professionals, nurses, home health aides, and members of schools of dentistry and dental hygiene. For the first time, three states—Arizona, Rhode Island, and Iowa—received State-based Examples of Network, Innovation, Opportunity, and Replication (SENIOR) grants to implement pilot oral health projects for selected groups of older adults. CDC also funds an evaluation of oral cancer data collected by cancer registries in South Carolina and West Virginia to find ways to improve data accuracy.

Guiding Infection Control in Dentistry

Infection control in dental offices is essential to ensuring the public's safety and retaining its confidence. To help minimize the risk of transmitting infectious diseases in the dental environment, CDC published an updated *Guidelines for Infection Control in Dental Health-Care Settings—2003* (MMWR 2003;52[RR-17]; available at <http://www.cdc.gov/mmwr>). CDC recommendations guide infection control practices in dental offices nationally and globally and provide direction for the public, policy makers, and dental practitioners. These recommendations also affect technology development in the dental industry. In addition, CDC investigates disease outbreaks and environmental hazards in dental offices and identifies emerging problems.

Supporting a National Research Network

Through the Prevention Research Centers, CDC supports research that examines the effectiveness of innovative strategies to promote oral health in predominantly poor, ethnically diverse communities. Partners in these efforts include schools

of public health and dentistry, professional organizations, and state health departments. For example,

- Researchers at the Columbia University Harlem Health Promotion Center designed, implemented, and evaluated an oral health training program for nurses and home attendants caring for home-bound elderly adults.
- Researchers at the University of Washington Health Promotion Research Center are training elderly adults to teach oral health to children. This approach could benefit both age groups.

Monitoring Oral Health in America

Routine surveys provide a wealth of information about the oral health of Americans—for instance, what the biggest oral health problems are, which oral diseases are on the rise, and which groups of people are most at risk. CDC supports Web-based systems that combine oral health data from many sources. For example, the National Oral Health Surveillance System (<http://www.cdc.gov/nohss>) links oral health data from various state-based systems, including state oral health surveys and the Behavioral Risk Factor Surveillance System. In addition, the annual State Dental Program Synopses (<http://www2a.cdc.gov/nccdphp/doh/synopses>) presents state population demographics and information about the activities and funding levels of state dental programs.

CDC also helps health departments collect, interpret, and share oral health data specific to their areas. States and communities use the data to monitor their progress in meeting *Healthy People 2010* goals for oral health, target limited resources to people with the greatest needs, and compare their oral health problems with those of other states and the nation as a whole.

Future Directions

CDC will continue to help states strengthen their oral health programs and develop effective interventions. CDC also will continue to seek opportunities to work with partners in oral health research, surveillance, education, and evaluation.

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